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Disciplina	519.5/44
Soggetti	Algorithms Probabilities Application software Computers Data structures (Computer science) Computer science—Mathematics Algorithm Analysis and Problem Complexity Probability Theory and Stochastic Processes Computer Applications Computation by Abstract Devices Data Structures Discrete Mathematics in Computer Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Parameterized Enumeration, Transversals, and Imperfect Phylogeny Reconstruction -- Online Problems, Pathwidth, and Persistence -- Chordless Paths Through Three Vertices -- Computing Small Search Numbers in Linear Time -- Bounded Fixed-Parameter Tractability: The Case $2^{\text{poly}(k)}$ -- Refined Memorisation for Vertex Cover -- Parameterized Graph Separation Problems -- Parameterized Coloring

Problems on Chordal Graphs -- On Decidability of MSO Theories of Representable Matroids -- On Miniaturized Problems in Parameterized Complexity Theory -- Smaller Kernels for Hitting Set Problems of Constant Arity -- Packing Edge Disjoint Triangles: A Parameterized View -- Looking at the Stars -- Moving Policies in Cyclic Assembly-Line Scheduling -- A Structural View on Parameterizing Problems: Distance from Triviality -- Perfect Path Phylogeny Haplotyping with Missing Data Is Fixed-Parameter Tractable -- Simplifying the Weft Hierarchy -- The Minimum Weight Triangulation Problem with Few Inner Points -- A Direct Algorithm for the Parameterized Face Cover Problem -- On Finding Short Resolution Refutations and Small Unsatisfiable Subsets -- Parameterized Algorithms for Feedback Vertex Set -- Automated Proofs of Upper Bounds on the Running Time of Splitting Algorithms -- Improved Parameterized Algorithms for Feedback Set Problems in Weighted Tournaments -- Greedy Localization, Iterative Compression, and Modeled Crown Reductions: New FPT Techniques, an Improved Algorithm for Set Splitting, and a Novel 2k Kernelization for Vertex Cover -- Space and Time Complexity of Exact Algorithms: Some Open Problems -- Practical FPT Implementations and Applications.

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### Sommario/riassunto

The central challenge of theoretical computer science is to deploy mathematical insights in ways that serve the creation of useful algorithms.

In recent years there has been a growing interest in the two-dimensional framework of parameterized complexity, where, in addition to the overall input size, one also considers a parameter, with a focus on how these two dimensions interact in problem complexity. This book presents the proceedings of the 1st International Workshop on Parameterized and Exact Computation (IWPEC 2004, <http://www.iwpec.org>), which took place in Bergen, Norway, on September 14–16, 2004. The workshop was organized as part of ALGO 2004. There were seven previous workshops on the theory and applications of parameterized complexity. The first was organized at the Institute for the Mathematical Sciences in Chennai, India, in September, 2000. The second was held at Dagstuhl Castle, Germany, in July, 2001. In December, 2002, a workshop on parameterized complexity was held in conjunction with the FST-TCS meeting in Kanpur, India. A second Dagstuhl workshop on parameterized complexity was held in July, 2003. Another workshop on the subject was held in Ottawa, Canada, in August, 2003, in conjunction with the WADS 2003 meeting. There have also been two Barbados workshops on applications of parameterized complexity. In response to the IWPEC 2004 call for papers, 47 papers were submitted, and from these the program committee selected 25 for presentation at the workshop. In addition, invited lectures were accepted by the distinguished researchers Michael Langston and Gerhard Woeginger.

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